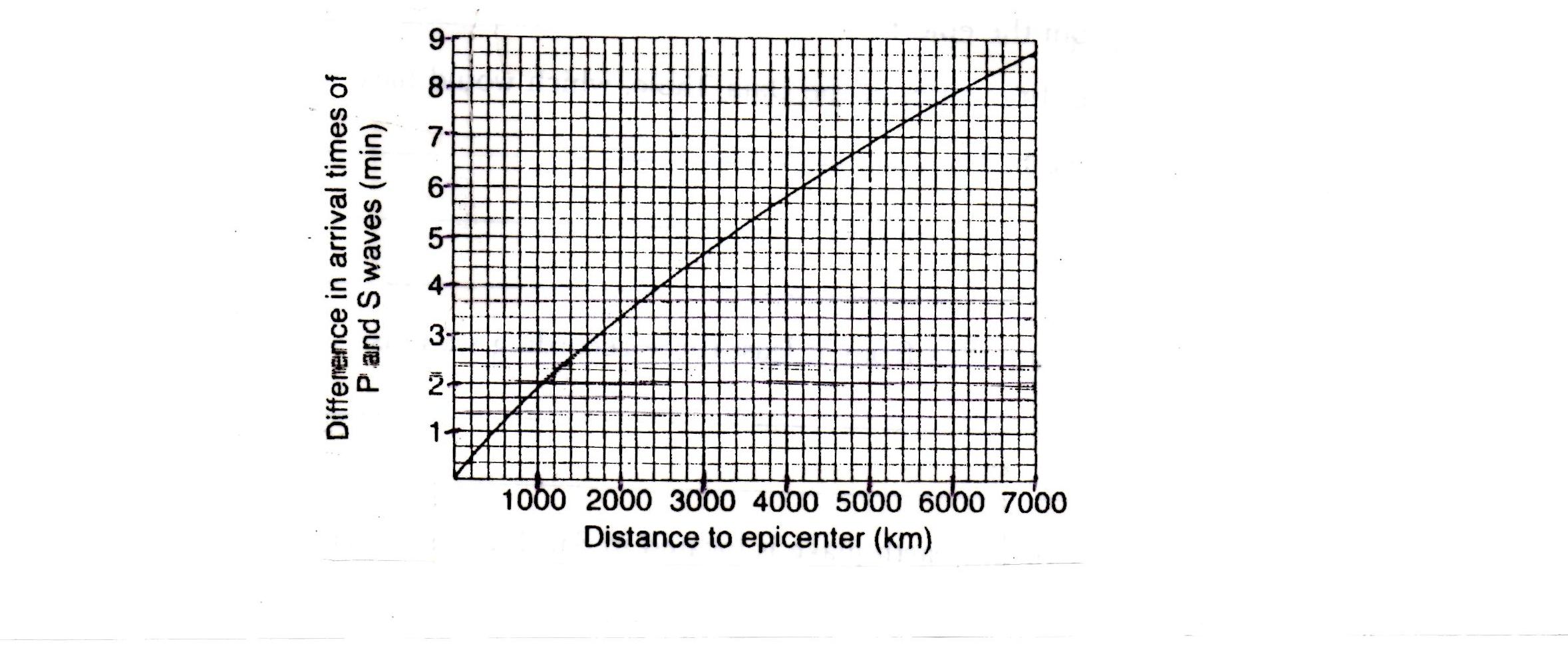
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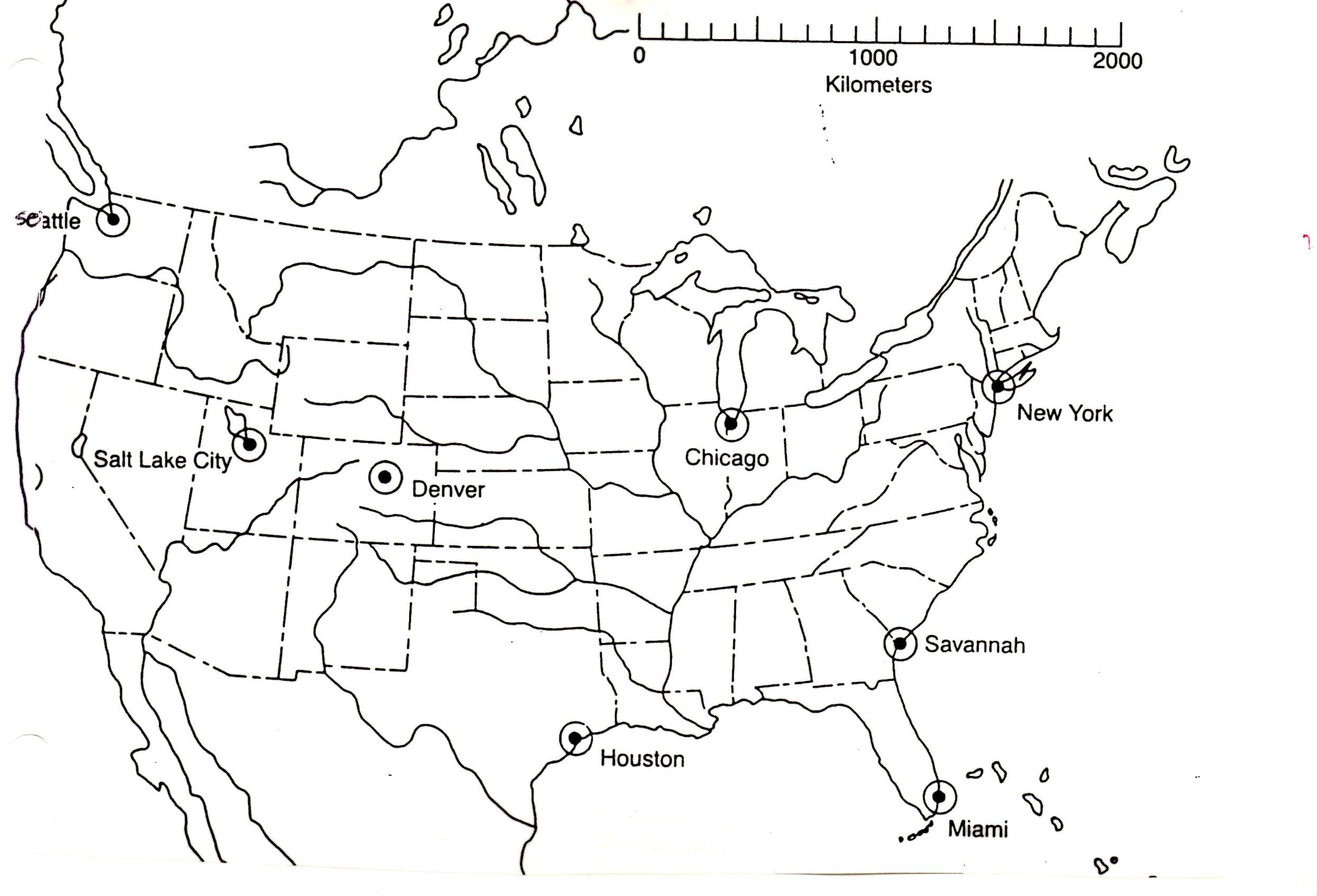
Earthquakes Test

1. An earthquake has occurred somewhere in the United States. Its P and S waves are recorded by seismographs located at the three cities located in the Data Table below.

|  |  |  |
| --- | --- | --- |
| City | Difference in arrival times of P and S waves | Distance from epicenter (Kilometers) |
| Houston, TX | 3 min 40 sec |  |
| Savannah, GA | 2 min 10 sec |  |
| Salt Lake City, Utah | 4 min 30 sec |  |

1. Use the graph below to determine the distance from the epicenter to each of the cities. Record your answer in the chart above
2. Use the map, map scale and compass to find all points around each city that might represent the epicenter
3. Put a large star on the map at the location of the **exact** epicenter





Answer the following questions referring to the map above.

1. Which city on the map is the closest to the earthquake’s epicenter?

2. How far is this city from the epicenter?

3. Of the scientists at the three cities in the data table, which would have felt the earthquake:

a. First \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

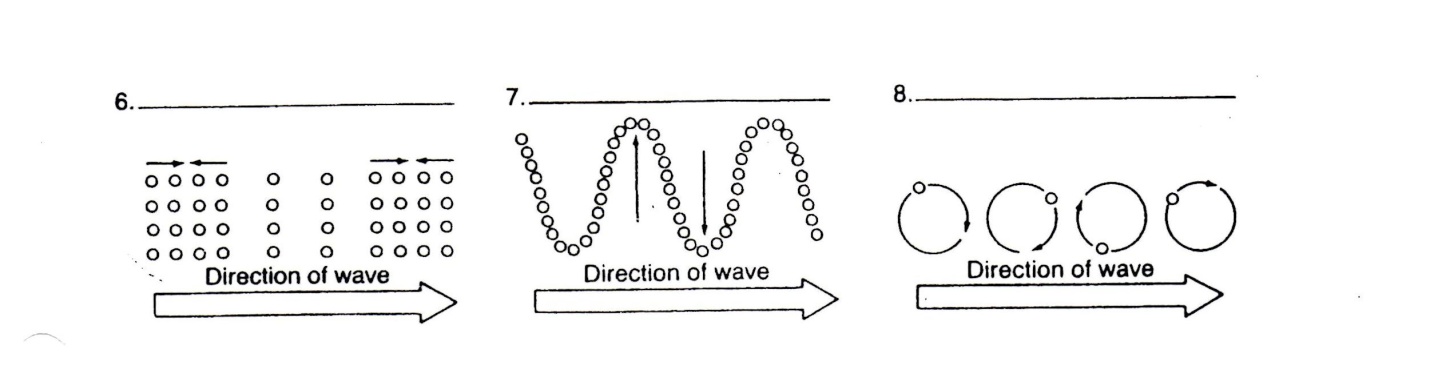
b. Second \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. Third \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Multiple Choice

1. If a house was built near a fault, what type of soil should the house be built on to minimize damage in the event of an earthquake?
   1. Bedrock c. Cliff
   2. Landfill d. Fault Zone
2. The most common cause of earthquakes is
   1. Volcanoes c. Tsunamis
   2. Faulting d. Weather
3. Which of the following earthquake waves moves the fastest?
   1. P waves c. Tsunamis
   2. L waves d. S waves
4. The focus of an earthquake is
   1. A spot on the surface of the Earth where an earthquake starts
   2. At the surface of the ocean where P waves begin
   3. Located where the fault line appears on the Earth’s surface
   4. Beneath the Earth’s surface where rocks break and move
5. S waves
   1. Travel through solids, liquids, and gases.
   2. Travel through liquids but not solids
   3. Travel through solids but not liquids
   4. Do not travel through solids and liquids

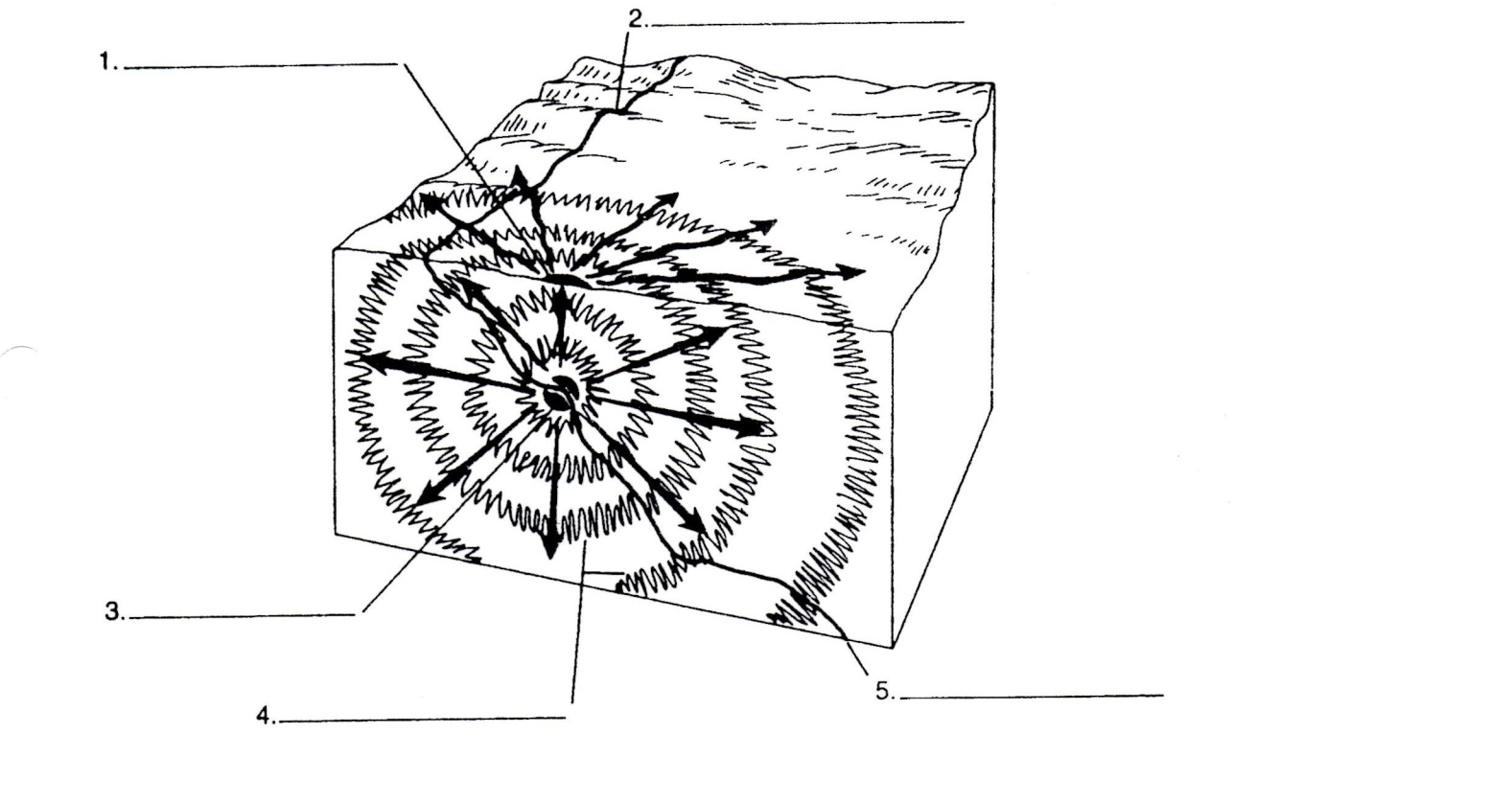
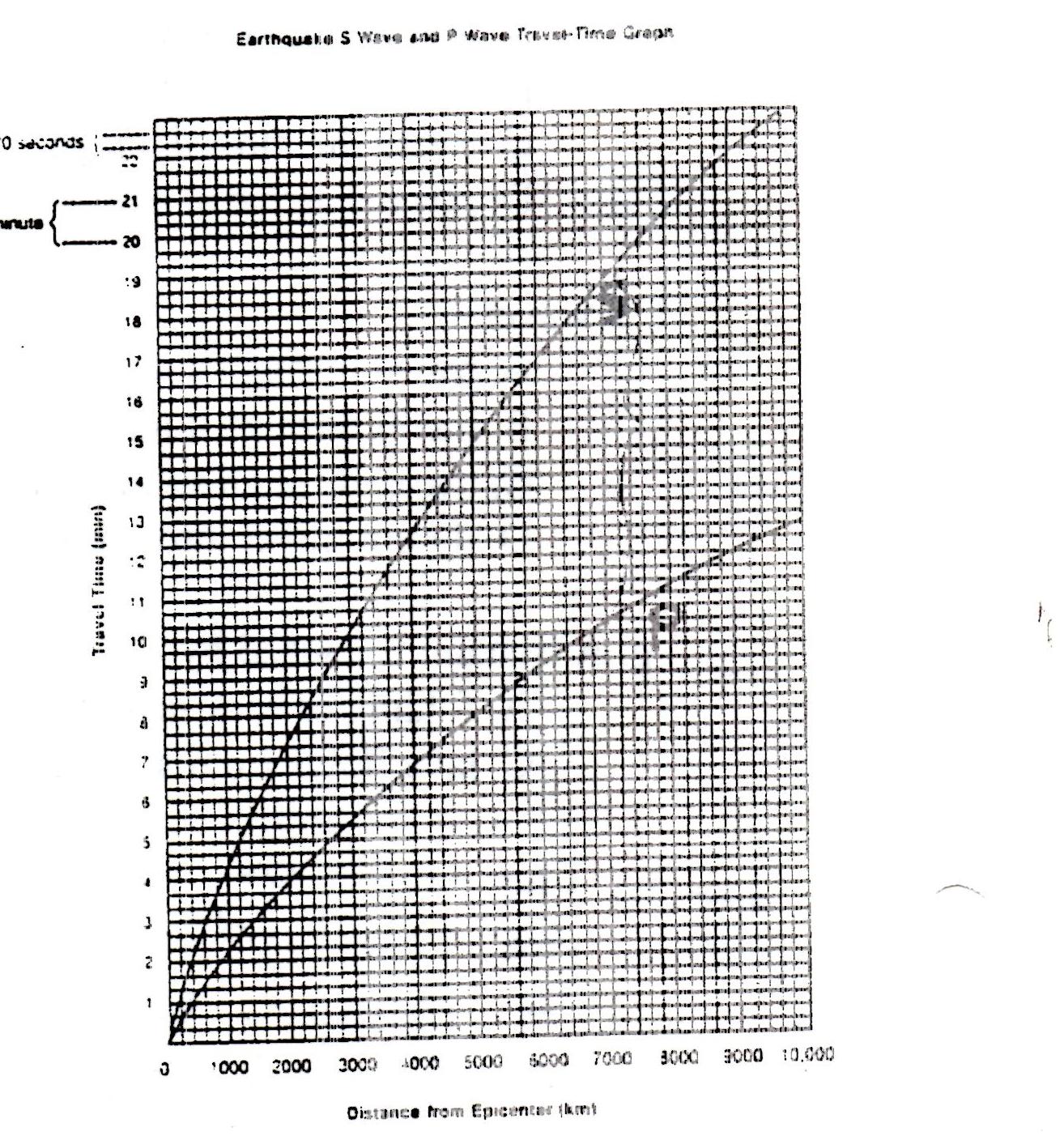
Match the following waves with the appropriate motion: P-wave, S-wave, L wave



9. The type of wave that causes most damage to an building on the surface the surface is a

* 1. Primary wave c. Love wave
  2. Secondary wave d. Seismic wave

Label the parts of the diagram that are associated with earthquakes



Use the P/S graph below to answer

the following questions:

1. If you were 8,500 Km from the epicenter,

how long would it take for the P-wave to reach you?

2. If an S-wave reached you in 17 minutes 30 seconds,

how far away from the epicenter would you be?